

plastic film to be stretched
extruding the plastic into a film
orientating the plastic film by stretching after
extrusion and
after orientation subjecting the plastic film to
pressurized gas so that the gas diffuses in the
cavitation bubbles, and thus forming in the plastic film
bubbles containing gas.--

--25. (new) A method according to claim 24, comprising
arranging gas to act on the plastic film after a first
orientation stage and thereafter subjecting the plastic film to a
second orientation which is substantially perpendicular to the
first orientation so that the bubbles containing gas expand due
to the influence of the second orientation and the gas.--

--26. (new) A method according to claim 25, wherein at the
first orientation stage the plastic film is orientated in the
machine direction and at the second orientation stage the plastic
film is orientated in the direction substantially transverse to
the machine direction.--

--27. (new) A method according to claim 24, wherein the
pressure of the gas acting on the plastic film is over 3 bars.--

--28. (new) A method according to claim 24, wherein before
extrusion an oily substance or a substance having a melting point
lower than the orientation temperature of the plastic is mixed
into the plastic.--

--29. (new) A method according to claim 24, wherein the plastic film is heated at the same time as gas is fed.--

--30. (new) A method according to claim 29, wherein the pressure of the pressurized gas is increased so that the temperature of the gas rises, and thus the pressurized gas is used for heating the plastic film.--

--31. (new) A method according to claim 24, wherein pressurized gas is fed by a discharge chamber, a sealing chamber is provided at least at one end of the discharge chamber, and gas flowing into the sealing chamber is sucked and supplied back to the discharge chamber.--

--32. (new) An apparatus for making a plastic film, the apparatus comprising an extruder, at least one orientation device for orientating an extruded film by stretching and gas supply means arranged after the at least one orientation device for feeding pressurized gas into the plastic film after orientation by stretching so that the fed gas diffuses in the cavitation bubbles that are formed in the plastic film during stretching, and thus bubbles containing gas being formed in the plastic film.--

--33. (new) An apparatus according to claim 32, wherein the gas supply means are arranged after a first orientation device and the apparatus further comprises a second orientation device after the first orientation device in the direction of the plastic film, the second orientation device being arranged to orientate

the plastic film in the direction substantially transverse to the orientation direction of the first orientation device so that the bubbles containing gas expand due to the influence of the second orientation device and the gas.--

--34. (new) An apparatus according to claim 33, wherein the first orientation device is arranged to orientate the plastic film in the machine direction and the second orientation device is arranged to orientate the plastic film in the direction substantially transverse to the machine direction.--

--35. (new) An apparatus according to claim 32, wherein the gas supply means comprise a discharge chamber, which is provided with means for heating the plastic film.--

--36. (new) An apparatus according to claim 35, wherein the apparatus comprises means for increasing the pressure of pressurized gas so that the gas temperature rises so high that the gas heats the plastic film.--

--37. (new) An apparatus according to claim 32, wherein the gas supply means comprise a discharge chamber, and a sealing chamber is provided at least at one end of the discharge chamber.--

--38. (new) An apparatus according to claim 37, wherein the gas supply means comprise a pump which is arranged to suck gas from the sealing chamber and means for supplying the gas sucked from the sealing chamber into the discharge chamber.--

--39. (new) An apparatus according to claim 38, wherein the pump is arranged to suck additional air through the sealing chamber.--

--40. (new) A plastic film which comprises bubbles with the maximum diameter of about 100 micrometers and the maximum height of about 10 micrometers, the plastic film being subjected to stretching, material which has caused cavitation bubbles in the stretched plastic film being mixed into plastic of the plastic film, after stretching the plastic film being subjected to the pressure of pressurized gas so that the bubbles contain said gas and the foaming degree of the plastic film being over 70%.--

--41. (new) A plastic film according to claim 40, wherein an oily substance or a substance having a melting point lower than the orientation temperature of the plastic is mixed into the plastic to provide the cavitation bubbles that are formed during stretching.--

--42. (new) A plastic film according to claim 40, wherein the plastic film is made of polymethylpentene.--

--43. (new) A plastic film according to claim 40, wherein the plastic film is made of cyclic olefin copolymer.--

--44. (new) A plastic film according to claim 40, wherein the plastic film is made of a mixture of polymethylpentene and cyclic olefin copolymer.--

--45. (new) A plastic film according to claim 40, wherein the plastic film is provided with an electric charge.--

--46. (new) A plastic film according to claim 40, wherein at least one surface of the plastic film is provided with electrically conductive coating.--